

REMARKS

The Final Office Action of April 25, 2011, has been reviewed and these remarks are responsive thereto.

Status of the Claims

Claims 1-2, 6, and 13-28 have previously been cancelled. Claims 3- 5, 29, 32, 34-36, and 38 are amended. Thus, claims 3-5, 7-12, and 29-38 are pending. No new matter has been added.

Substance of Interview

The applicants thank the examiner for the telephonic interview conducted on June 23, 2011. Pursuant to MPEP 713.04, this response includes the substance of the interview.

Independent Claims 29 and 32

Independent claims 29 and 32 stand rejected under 35 U.S.C. § 103(a) in view of U.S. Patent Publication Number 2002/0075954 to Vince ("Vince") and U.S. Patent Publication Number 2003/0135860 to Dureau ("Dureau"). The rejection is respectfully traversed at least because the alleged combination lacks features of these claims and also because one of ordinary skill would not have made the alleged combination.

Neither Dureau Nor Vince Teach or Suggest Features of Claim 29

The rejection is respectfully traversed because neither Vince nor Dureau include the feature of amended claim 29 that reads "transcoding each of the second digital payloads to be formatted in a protocol that is selected depending upon the first protocol." The Office admits that Dureau lacks the previous recitation of this feature and instead cites to Vince. However, Vince also lacks this feature.

Vince Lacks The First and Second Digital Payloads Referenced In The "Transcoding" Feature

In Vince, a single television signal is split into two identical signals:

The demodulated signal is split at a splitter into a first signal and a

second signal, the first and second signals being substantially identical.

(Vince, ¶ 8, lines 3-6). These substantially identical copies of the same input signal are referred to as signal 32 and signal 34. (Vince, ¶ 18, lines 6-9). One of the copies (signal 34) is re-scaled to an SD signal. (e.g. Vince, ¶ 18-20). This is done so an SD signal can always be available for receivers that cannot decode HD. (Vince, ¶ 7).

The Office alleges that the two outputs of splitter 30 (substantially identical signals 32 and 34) are the first and second digital payloads of claim 29. But this contradicts the language of the claim itself. Claim 29 reads:

the plurality of first digital payloads formatted in the first protocol and the plurality of second digital payloads formatted in the second protocol are multiplexed together in the first digital transport stream.

Substantially identical signals 32 and 34 (the alleged first and second digital payloads) are not multiplexed together in a first digital transport stream. To the contrary, signals 32 and 34 are created as separate sets of payloads for the first time by splitter 30. Signals 32 and 34 therefore cannot be the first and second digital payloads of claim 29.

In addition, amended claim 29 also recites:

determining that the first protocol is dissimilar from the second protocol.

Vince also lacks this feature because the alleged first and second digital payloads (signals 32 and 34) are substantially identical copies of a single input signal. The protocols in which signal 32 and signal 34 are formatted are therefore not dissimilar.

Dureau fails to cure the above deficiencies of Vince. Indeed, even if Dureau included the first and second digital payloads of claim 29, those payloads would not correspond to signals 32 and 34 of Vince (the alleged first and second digital payloads) in the alleged combination. To the contrary, signals 32 and 34 of Vince would remain substantially identical copies of one another created by splitter 30.

Vince Fails to Transcode As Recited In Claim 29

In addition to the shortcomings above, signal 34 (the alleged second digital payloads) is not transcoded “to be formatted in a protocol that is selected depending upon the first protocol”

as recited in claim 29. To the contrary, signal 34 will be re-scaled as necessary such that it is output as signal 34' in SD format. Signal 34' will always be in SD format. Thus, the formatting of signal 34' is not selected depending upon the protocol of signal 32 (the alleged first digital payloads that are formatted in the first protocol).

For at least these reasons, Vince also fails to teach or suggest "transcoding each of the second digital payloads to be formatted in a protocol that is selected depending upon the first protocol." The rejection of claim 29 is therefore traversed.

The Rejection of Claim 32 is Traversed For Similar Reasons

Claim 32 recites similar features to those discussed above, such as "a plurality of second digital payloads that are each formatted in a second protocol that is different from the first protocol, wherein the plurality of first digital payloads... and the plurality of second digital payloads... were multiplexed together in the first digital transport stream prior to demultiplexing" and "a transcoder configured to transcode each of the second digital payloads to be formatted in a protocol that is selected depending upon the first protocol." The rejection of claim 32 is therefore traversed for at least similar reasons to those discussed above with respect to claim 29.

Dureau and Vince Are Not Combinable As Alleged

In addition to the reasons above, the rejection of claims 29 and 32 is also traversed because one of ordinary skill in the art would not have combined Dureau and Vince as alleged by the Office. In fact, several aspects of Dureau are incompatible with Vince. For example, Dureau is directed to "a proxy receiver in a viewer's home [that] is configured to perform transcoding and other processing...." (Dureau, abstract). Vince, on the other hand, is directed to a re-encoding system that may be located "for example, at a cable television system head-end." (Vince, abstract; *See also* ¶ 30, explaining that Vince may or may not be integrated into the Master Program Scheduler at a cable television headend.)

Further, the devices behind the Dureau proxy receiver register with the proxy receiver:

[S]econdary devices 320 may register with receiver 12. This registration may include configuration information corresponding

to a secondary device, including required data format and any required communication details (e.g. IR, DSSS, port ID, etc.).

(Dureau ¶ 42, lines 11-15). The registration data is used by the proxy receiver to target signals to specific devices:

The signals conveyed from control unit 302 may indicate both the data which is to be transcoded and the target of the data. In one embodiment, the target may be indicated by an ID which identifies the secondary device. Subsequent to receiving the data and target ID, control unit 502 may use the received ID in accessing config table 510 to determine the target format for the data. Upon determining the target format, master unit 502 may then initiate transcoding of the data to the target format utilizing the appropriate transcode subunit 520.

(Dureau ¶ 44, lines 7-16).

Unlike Dureau, Vince does not target signals to devices. To the contrary, Vince “provides for multiplexing of the re-encoded SD signal with the original HD signal, which enables the multiplexed signal to be broadcast without regard to the type of receiver that will be receiving the signal.” (Vince ¶ 31, lines 4-8). Broadcast signals are the type of signals received by Dureau, not the type of signals sent by Dureau. (Dureau ¶ 26, lines 1-11).

Vince’s broadcast type system is also incompatible with the additional functionality provided by Dureau. For example, Vince’s broadcast system would be incompatible with Dureau’s proxy receiver assisting tablet 352A in performing processing tasks due to the one-to-one nature of the data communication involved in this task. (*See* Dureau ¶ 33, lines 21-25).

One of ordinary skill would not have had a reason to combine the functionality of a headend device like Vince with a home-based proxy receiver like Dureau. This is especially true in view of the differing operations of Vince and Dureau outlined above. Indeed, the Office fails to identify a reason for modifying Dureau. The Office indicates that the combination would be made “in order for a system to correctly process the compatible MPEG 2 video program content and display to the user without any error.” But this goal is already achieved by Dureau alone. (*See*, e.g., Dureau ¶ 28 & 32.) Because Dureau already achieves this goal, this goal does not provide a reason to modify Dureau. The rejection of claims 29 and 32 is therefore respectfully traversed.

Independent Claim 3

Claim 3 stands rejected under 35 U.S.C. § 103(a) in view of Vince and U.S. Patent Publication Number 2002/0196939 to Unger et al. (“Unger”). The rejection is respectfully traversed at least because the alleged combination lacks features of these claims and also because one of ordinary skill would not have made the alleged combination.

The Alleged Combination Lacks Features of Claim 3

The Office alleges that the combination of Vince and Unger discloses both of the following features:

transporting the second digital payload to a transcoder... upon determining that the protocol in which the second digital payload is formatted is not in a set of one or more supported protocols; [and]

bypassing the transcoder... upon determining that the protocol in which the first digital payload is formatted is in the set of one or more supported protocols.

As agreed during the interview, the rejection is traversed at least because the above-quoted features are not both present in the alleged combination. The Office cites to the paths of signals 32 and 34 of Vince for these features, alleging that the two outputs of splitter 30 of Vince are the first and second digital payloads. But signal 32 of Vince does not bypass the alleged transcoder upon determining that the protocol in which signal 32 is formatted is in the set of one or more supported protocols. Similarly, signal 34 of Vince is not sent to decoder 40 upon determining that the protocol in which signal 34 is formatted is not in the set of one or more supported protocols. Rather, signal 32 always sent to multiplexer 70 and signal 34 is always sent to decoder 40. (See Fig. 1 and Vince ¶ 18). The above features are not met because splitter 30 directs these signals without regard to a determination of whether the protocol in which the signals are formatted are in the set of one or more supported protocols or not.

Even if some component of Vince were to make the recited determination, signals 32 and 34 of Vince would still fail to meet the above-quoted features of claim 3. Signals 32 and 34 are substantially identical by virtue of being generated as separate signals for the first time by splitter 30. (Vince ¶ 18, lines 7-9). Thus, the protocol in which both of the alleged digital payloads are

formatted is the same. The one protocol in which the alleged first and second digital payloads are formatted cannot simultaneously be in the set of one or more supported protocols and also not in this same set. It is therefore impossible for both of the above-quoted features of claim 3 to be met by the alleged first and second digital payloads (signals 32 and 34). The alleged combination therefore fails to teach or suggest at least the above-quoted features of claim 3.

The alleged addition of Unger's packet sorter to Vince does not change that the combination lacks the above-quoted features. Indeed, contrary to the Office's assertion, the cited portion of Unger does not mention determining whether a protocol in which a payload is formatted is in a set of one or more supported protocols. Rather, the cited portion of Unger discusses the operation of a set-top box, which buffers, decrypts, and decodes packets associated with "main audio, main video and a secondary video used for picture-in-picture" and discards other packets. (Unger ¶ 141-142). The Office specifically cites packet sorter 1002, which places packets in buffers for main program audio, main program video, and picture-in-picture video. Unger describes packet sorter 1002 as follows: "the raw data stream is received by a Packet sorter 1002 that provides a function similar to that described in connection with FIG. 17 above to demultiplex the stream of packets based upon PID." (Unger ¶ 141, lines 6-9).

That a set-top-box may select packets related to the content it will display based on PID does not affect the above-described operations of Vince. Indeed, even if the alleged combination were operable and Unger's demultiplexer were able to be used in Vince to select only certain packets for processing based on PID, those packets would still be sent from splitter 30 and processed as discussed above. Any sorting of packets performed by packet sorter 1002 would therefore fail to cure to above-described deficiencies of the rejection.

Vince and Unger Are Not Combinable As Alleged

Unger relates to a system that "multiple encrypts only a portion of... a television program to permit coexistence of multiple conditional access encryption systems...." (Unger, abstract). One of ordinary skill would not have sought to combine Unger's encryption system with Vince. Vince includes two copies (an SD and an HD copy) of a video stream in its output. Unger, on the other hand, is directed to an encryption arrangement that avoids transmitting such duplicates:

This need to carry multiple copies of the programming (called “full dual carriage”) uses up valuable band-width that could be used to provide the viewer with additional programming content. Certain embodiments of the present invention address this problem....

(Unger ¶ 34, lines 1-5). This portion of Unger teaches away from the type of system discussed in Vince.

Further, the Office suggests combining a packet sorter from a set-top box in Unger (element 1002) with the re-encoding system of Vince, which may be located “for example, at a cable television system head-end.” (Vince, abstract; *See also* ¶ 30, explaining that Vince may or may not be integrated into the Master Program Scheduler at a cable television headend.) One of ordinary skill would not be motivated to combine the headend device of Vince and the set-top box of Unger together due to the different functions of these devices generally and further in view of the above-quoted portions of Unger that teach away from the system of Vince.

Indeed, the Office fails to provide a reason to make the alleged combination of a set-top box with a headend. Although the Office states that Vince would be modified “in order to properly transport[] the program signal to the correct path,” Vince already does this without any modifications. (*See, e.g.*, Vince ¶ 31). The rejection of claim 3 is therefore respectfully traversed for this additional reason.

Dependent Claims

Each of the remaining claims stands rejected under 35 U.S.C. § 103(a) as being unpatentable over various combinations of documents that each include the combinations discussed above. Each of these remaining claims depend from claims 3, 29, or 32, and the other documents cited by the Office do not cure the above-described deficiencies of the rejections of these base claims. These remaining claims are therefore allowable for at least the reasons discussed above, and further in view of the various features recited therein.

During the interview the examiner suggested including a dependent claim that encompasses many of the elements of Figure 1, such as Copy Protection Encoder 34 and Copy Protection Deencoder 60, Demultiplexer 62, Transcoder 64, Multiplexer 66, Copy Protection Encoder 68, Copy Protection Deencoder 36, and Demultiplexer 38. The applicant respectfully

directs the examiner's attention to dependent claims such as claims 34 and 37. The elements of these claims may be met by the list of elements from Figure 1 included above.

The examiner also suggested during the interview that the combinability of the documents used to reject the dependent claims may need to be reconsidered. The applicant agrees and believes the alleged combinations are improper. For example, U.S. Patent Publication 2005/0175178 to Candelore ("Candelore") is alleged to be combinable with Vince and various other documents in the rejections of dependent claims 7-12, 30-31, and 33-38. In addition to the reasons discussed above, these rejections are traversed because one of ordinary skill would not have combined Candelore and Vince.

Vince and Candelore address backward-compatibility in opposite ways. Candelore discusses a CableCard for insertion into "a television or television STB". (paragraph 10, lines 4-7). The CableCard may be useful due to "the existence of such a large installed base of 'legacy' devices.'" (e.g. paragraphs 2, 14). These devices do not support new formats, but they may if the Candelore CableCard is added to them.

Instead of upgrading the legacy devices like Candelore, Vince upgrades the headend and allows the "legacy SD equipment" to remain:

The provision of both an SD signal and an HD signal in the multiplexed signal enables both SD television receivers and HD television receivers to receive content initially provided as an HD signal. The re-encoding may be performed, for example, at a cable television system headend."

(Vince, abstract).

One of ordinary skill would have had no reason to add the Candelore CableCard to the system of Vince. With backwards compatibility provided by the Vince headend, there would have been no reason to make additional modifications to the legacy equipment. Conversely, if the Candelore CableCards were deployed to provide backwards compatibility, no reason for using the Vince headend would have remained. Use of one of Candelore or Vince would render use of the other superfluous. Because the alleged combinations would not have been made, the rejections involving Candelore and Vince are respectfully traversed.

Conclusion

All rejections having been addressed, the present application is believed to be in condition for allowance. Should the Examiner have any questions, the Examiner is invited to telephone the undersigned at the number below.

Respectfully submitted,

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